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ABSTRACT

Kindergarten age children were screened at pre-registration through extensive diagnostic procedures for placement in a class designed for normal children with developmental delays staffed by a Special Education teacher and language therapist. Instruction was prescriptive and individualized. Of the twelve children who were high risk failures at the onset, eight improved to low risk failures at the conclusion with statistical significance. It was concluded that Special Education is valuable for non-handicapped children with developmental learning problems. (Author)

SPECIAL EDUCATION FOR NORMAL KINDERGARTEN CHILDREN WITH SUBTLE DEVELOPMENTAL LEARNING DELAYS

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INTRODUCTION:

Traditionally, Special Education has been reserved for handicapped children. The basic concept of this study was to apply special educational techniques and teaching skills to essentially non-handicapped or normal children who displayed subtle signs of developmental delay. These aspects of developmental delay are very often found on the lower end of a continuum of normal entrants into public school kindergarten programs. The concern for this type of child arose out of the frequency with which a child flounders through a kindergarten program, needing something additional to the customary early childhood education program and the thirty-to-one (30-1) teacher-pupil ratio. At the end of the year, such children face a repetition of kindergarten, social promotion without real readiness or movement to a transitional class. Oftentimes, this child completes first grade before a thorough understanding of his problems has been ascertained, or his attitude toward school has already gone downhill with the eventuality of a learning disability problem emerging.

The aim of this experimental kindergarten, funded through Title I, E.S.E.A., was to select children prior to school entrance, subject them to a smaller teacher-pupil ratio, and provide Special Education awareness and sensitivity to these problems on a daily basis. The idea of giving only handicapped children the services of Special Education was cast

aside for the extension of such educational programming upward to children of normal potential. Unlike customary early childhood programs of a head start nature, a preventative and diagnostic approach was being taken rather than a means to effect a "cure" or to improve skills depressed due to external factors. The concern was to prevent failure in kindergarten due to the structure of admission policies (generally governed by Chronological Age) and the wide varieties of maturational development evidenced within the normal range at this crucial point in a child's academic career. The procedure to accomplish this goal was to stress screening processes, small teacher-pupil ratios, and to innovatively offer Special Education of the traditional type to a usually non-recipient group. The assumption underlying the latter feature is an increased level of training and sensitivity to developmental problems as this is the heart of Special Education.

SELECTION OF SUBJECTS:

The initial step in the process of organizing the class was the selection of subjects. Children who would be five years of age by December 31st of any year would be eligible for entrance into kindergarten in September of that year. The screening process for placement began in the late spring of the preceding school year at preregistration. A diagnostic team consisting of school principal, school psychologist, social worker, psychiatrist, speech and language therapist, school nurse, and Special Education teacher was present at each elementary school. All incoming pre-registrants were interviewed first by the school princi-

pal and then by each member of the team. Often two disciplines worked together, i.e., social worker and school psychologist. Prior to registration, each parent received a form to fill out regarding the child's development. This form was brought to registration and became the entree to the screening. Simple tests of a guideline nature were utilized, such as: figure drawing, spontaneous conversation, behavior control, general health, and brief case histories. In other words, an attempt was made to pre-screen children on the basis of educated estimates based on skilled judgment and non-standardized observation techniques initially. Those children who represented problems through this process as a result of staff conferences were invited back for a final screening. At that time, intensive psychological, social work, language and health evaluations were completed and the class selected. One interesting factor worthy of note was that it was felt by the screening team that trained observation provided a more accurate measure of eligibility for the program than did any specific test or battery of tests. The standardized tests served to confirm judgments in that fourteen (14) children were screened after pre-screening, and ten (10) were retained for the class.

Thus, by definition, the children served in this program were of normal intelligence but representative of subtle developmental delays in language, social and emotional maturity, and perceptual development.

PROCEDURE:

Ten children were selected for attendance in the diagnostic and preventative kindergarten on the basis of the above procedures. Enrollment was

for the full school term (180 days) for two and one-half hours per day. Upon admission to the program, all children were given the Meeting Street School Screening Test for Early Identification of Children with Learning Disabilities. Using the suggested cut-off point of 39 (raw score) and below for lack of kindergarten readiness, all children selected fell into this area or into the questionable area (raw scores 40-44) with the exception of one child who was selected on the basis of emotional problems which inhibited readiness despite an MSSST score of 54. Raw scores and risk levels may be seen in Table I.

Upon completion of the program, the Metropolitan Readiness Test, which has a similar scoring process and risk level, was administered. A different post test measure was used as there are no comparable forms available on the Meeting Street School Screening Test, and as retest processes were held within a 180-day period, concern was for practice effects. Some research exists pointing to the two tests measuring comparable factors as found in the Monograph dealing with this test.* Metropolitan Readiness Test scores may also be seen in Table I.

The school program consisted of combining an early childhood education program for first grade readiness with special emphasis upon teaching techniques for learning disabilities. Each child received a complete battery of diagnostic tests of an educational and psychological nature in order to determine the specific areas of developmental delay. The teacher then proceeded to plan a model program for each child, working through

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*Hainsworth, Peter K. and Siqueland, Marian L., Early Identification of Children with Learning Disabilities: The Meeting Street School Screening Test (Crippled Children and Adults of R.I., Inc., Meeting Street School, Providence, R. I.) c 1969, pp. 17-19.

major modalities such as visual-perceptual motor skills, language development, behavioral and social development, and body awareness or kinesthetic skills. Emphasis was placed on an individualized, tailor-made program for each child phasing through receptive, integrative, and expressive functions in the usual developmental learning areas such as discrimination of form, space, time; associative skills; selection of relevant material; retention skills; sequencing, etc. Basically, prescriptive education was the method with the innovative approach of utilizing a trained Special Education teacher with children who were essentially normal and who would not usually receive this assistance.

Additional supportive help was provided through use of a language therapist to develop communication and language usage skills. Children were worked with individually and in groups with constant reinforcement by the classroom teacher. A combined effort of language therapist and Special Education teacher was the basic process involved.

Finally, all parents were seen on a regular basis by social workers. The progress of the child was discussed. The parental reactions to their children, the program, and the educational and familial process were dealt with in these case work sessions.

RESULTS:

The experimental design of this investigation was devised so as to test the Null Hypothesis that:

H_o: The probability of a child changing from a high risk to low risk is equal to the probability of a child showing no change at all.

Table II shows the distribution of frequencies in a Fourfold Table for computation of X^2.

The results of the analysis between the pre test and post test results yielded a significant chi-square. On this basis, the hypothesis that the probability of change in readiness occurring would be equal to no change in readiness as a result of the program would have to be rejected. It would appear that within the sample contained in this study, the probability of the change from high risk to low risk occurring by chance would be less than five in one hundred.

Additional analysis of the data demonstrated that 62 percent of the children (8 of 13) involved in the program went from a high risk level for success in kindergarten to a low risk level for failure in grade one at the conclusion of the program and were so placed for the following school year. Of these eight children, two were able to be returned to regular kindergarten at the midyear point in the school term. In relationship to this factor, two of the five children who remained high risks received only one-half year of the special program as they were screened and placed in the program at midyear after having been exposed to the regular kindergarten class for the first part of the school year. The total of five children (high risk) were scheduled for placement in K-1 transition classes with full diagnostic data available concerning their learning problems.

Table I

Metropolitan Readiness Test of "C"

Subject	Risk		Raw Score		
	Pre Test MSSST	Post Test METROPOLITAN	Pre Test MSSST	Post Test METROPOLITAN	Letter Grade
1	high	low	40	57	C+
2	high	low	40	52	C
3	high	low	18	45	C-
4	high	low	37	45	C-
5	low	low	54	58	C+
6	high	low	42	50	C
7	high	high	35	38	D+
8	high	high	22	28	D-
9	high	low	43	59	C+
10	high	high	24	36	D+
11	high	high	15	38	D+
12	high	low	41	59	C+
13	high	high	28	42	D+
Totals:	12 high risk 1 low risk	8 low risk 5 high risk	Total: 439 Mean: 33.76	Total: 607 Mean: 46.69	

Table II

Distribution of Frequencies on MSSST and MRT

	Pre Test	Post Test	
MSSST	High Risk 12	High Risk 5	MRT
MSSST	Low Risk 1	Low Risk 8	MRT

$X^2 = 4.16$, df, 1

significant at $p < .05$

CONCLUSIONS:

Certain limitations were placed on this study by sample size and test availability. It would have been appropriate to perform test/re-test with the same test (Meeting Street School Screening Test); however, as no comparable form was available, it was felt the practice effect would have produced misleading results within the 180-day school year. Thus, a comparable test (Metropolitan Readiness Test) was utilized. Further, a larger group of children would produce a more favorable sample from which to draw conclusions based on statistical techniques--except that to increase the class size would have defeated the purpose of the program.

Regardless of these limitations, several meaningful conclusions can be drawn. First, it was important to note that no single test or combination of tests were of great value in screening participants. Rather, the skilled observations and judgment of a well-trained, multidisciplinary staff proved more discerning. Secondly, within the sample worked with, a significant level of change was noted by the innovative approach of applying special educational techniques to children who ordinarily do not receive them. This can be seen by the chi-square value and the percentage of change. It was of further interest that of the five children who showed no change (remained high risk), two entered the program at midyear, and all five came from homes with voluminous internal problems acting as an artifact on development as revealed by social case work.

From these factors, some broader conclusions emerge. Support is evidenced for utilizing skillful diagnosticians and their experiential

services in evaluating children rather than seeking a panacea in a particular battery of tests. Also, additional evidence is demonstrated for continuing to approach learning problems at an early level before the child is lost into the mainstream educational program. Finally, Special Education teachers and the techniques available to them by virtue of training and experience should perhaps be made available to a wider group of normal children in order to key in on subtle development and learning problems. Similarly, the regular classroom teachers should be exposed to more Special Education training of a formal or in-service nature to help increase their awareness and skills for dealing with these problems.

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